

REMARKS

Claims 1-21 were previously pending in this application. Claims 1, 14 and 19 have been amended herein. No new matter has been added. Applicants respectfully request reconsideration of the application in view of the foregoing amendments and the following remarks.

Claim Rejections – 35 U.S.C. § 103

Claims 1-18 and 20-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu et al., U.S. Patent No. 6,275,754 B1. Claim 19 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu et al., U.S. Patent No. 6,275,754 B1, in view of Franke et al., U.S. Patent No. 5,485,378. Applicants submit that the claims are patentably distinct from the cited references, taken either alone or in combination.

Shimizu et al. disclose a system for automatically parking a vehicle when there are one or more objects within a presumed locus of movement of the vehicle or when the start position at which the automatic parking control is started has been deviated. See Shimizu et al., col. 1, lines 58-61. Specifically, the automatic steering system in Shimizu et al. comprises a steering actuator 7, memory means 23, control means 22, object detecting means S6, determining means 24, correcting means 25, angle detecting means S1 and an operational stage display device 11. According to the Specification, and as demonstrated in Figure 3A, the operational stage display device 11 displays a presumed path of movement of the vehicle based on one of four parking modes selected by the driver. See Shimizu et al., col. 6, lines 1-14. When the automatic steering system is in operation, the vehicle is automatically steered based on data for that particular parking mode (i.e. “back parking/left mode” as seen in Figures 3A – 3C). See Shimizu et al., col. 6, lines 19-24. Notably, the operational stage display device 11 shows a single picture image to the driver at each primary movement stage. See Shimizu et al., Figs. 3A-3C. Although Figures 3A through 3C display the presumed path of the vehicle at three distinct stages and indicate an angle of zero of the steered wheels in initial position, Shimizu et al. is silent as to a

first indicator that shows a path of the vehicle corresponding to the angle of zero degrees of the steered wheels regardless of the current angle of the steered wheels.

Further, the July 28, 2005 Office Action states that in Shimizu et al., Figs. 3A-3C, 4 and 10, along with column 5, line 65 through column 6, lines 1-15 of the Specification, show the “first and second indication and prospective path of the vehicle corresponding to the angle of the steered wheels on the display.” See Office Action, p. 3. However, Shimizu et al. merely disclose a picture image of a predetermined path of the vehicle and is apparently silent as to a first and second indication simultaneously displayed and superimposed on one another so as to instruct the driver on how to manipulate the steering wheel to remain on course. Moreover, Shimizu et al. fail to disclose a second indicator that continuously changes when backing to reflect the current predicted path of the vehicle based on the angle of the wheels at that particular instant in time. In fact, Shimizu et al. teach away from such a display by disclosing a memory means which stores a predetermined locus of movement of the vehicle to a target position and then executes that movement without assistance from the driver in accordance with the selected parking mode. See Shimizu et al., col. 13, lines 26-29.

Applicants, on the other hand, disclose an interactive system whereby the driver constantly manipulates the steering wheel based on the position of the second indicator relative to the first indicator. In particular, Applicants’ invention simultaneously displays an image of the road, a first indicator and a second indicator, whereby the position of the first and second indicator relative to one another is continuously shown when backing. Advantageously, data representing predetermined second indicators corresponding to various angles need not be stored in memory because the CPU in Applicants’ invention computes the predicted path of the vehicle using the steered angle and then superimposes the second indicator on the image captured by the camera.

Moreover, Shimizu et al. fail to disclose a system whereby parallel parking is completed by moving the vehicle in reverse so as to cause a marker to coincide with the corner of a parking space as displayed on the monitor. Rather than superimposing a marker on the corner of a parking space through manipulation of the steering wheel, Shimizu et al. merely disclose a series of stationary target points predetermined based on the locus of movement and the selected parking mode.

Regarding Claim 19, the July 28, 2005 Office Action argues that the combined teaching of Shimizu et al. and Franke et al. would have made obvious the modification of the steering system in Shimizu et al. as taught by Franke et al. for maintaining a controlled course. Shimizu et al. does not teach or suggest Applicants' invention for the reasons set forth above. Furthermore, Franke et al. is directed to a device which provides a driver with the ability to intervene with the steering operation while minimizing the need for the driver to constantly make small steering corrections to maintain a prescribed set position. See Franke et al., col. 1, lines 50-67; col. 2, line 1. Franke et al. are silent as to a method for aiding steering a vehicle in reverse, whereby a second indication is positioned at the center of a route, the route being an image behind the vehicle that is displayed on a monitor. To the contrary, Franke et al. teaches away from such a system by disclosing a control mechanism aimed at minimizing driver intervention while operating the vehicle in a forward direction along straight or curved sections of road.

For at least these reasons, Applicants submit that amended independent claims 1, 14 and 19 are patentably distinct from the cited references, taken either alone or in combination. Further, Applicants submit that claims 2-13, 15-18 and 20-21, which are directly or indirectly dependent from amended independent claims 1 and 14, are also patentably distinct from Shimizu et al. for at least similar reasons. Therefore, Applicants request withdrawal of these grounds of rejection.

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CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of the claims and allowance of this application.

Respectfully submitted,
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